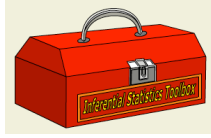


Macintosh users: SLIS 5080 – Calculating Pearson's r with Microsoft Excel (fat pears)



Pearson's r Using Excel on a Macintosh

Pearson's r is a measure of the **relationship** between two **interval** or **ratio** level variables.

For a discussion about the difference between ordinal, interval and ratio variables and why you should give a flip, see FAQ# 1089 at

<http://www.graphpad.com/faq/viewfaq.cfm?faq=1089>

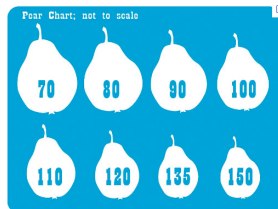
Just a few notes here:

When you square Pearson's r, don't forget to move the decimal.

The independent variable affects the dependent variable. There are several potential dependent variables below.

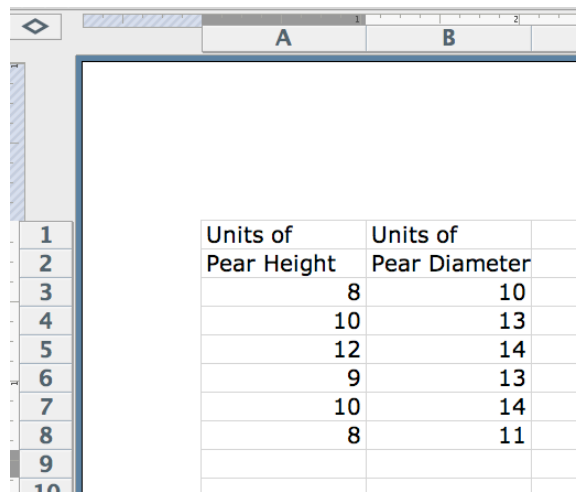


Hypothesis: Tall pears are usually bigger in diameter than short pears. The taller the pear, the greater its diameter.



Here we go using Excel:

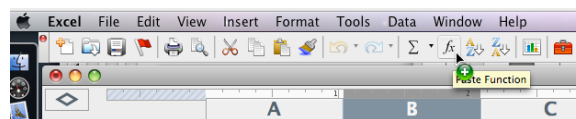
Put data in blanks like this (below):



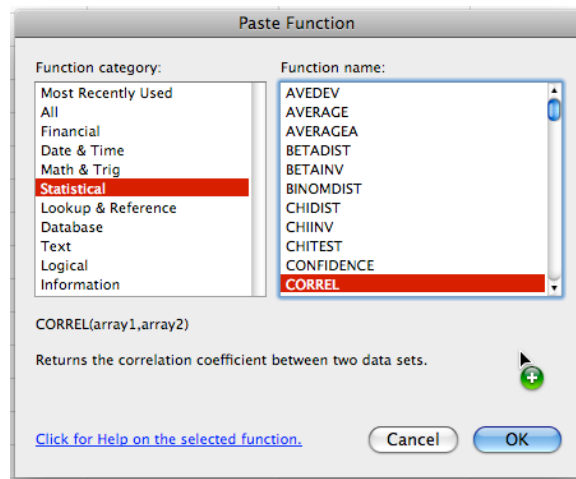
An Excel spreadsheet with columns A and B. Column A is titled 'Units of Pear Height' and column B is titled 'Units of Pear Diameter'. The data is as follows:

| Units of Pear Height | Units of Pear Diameter |
|----------------------|------------------------|
| 8 | 10 |
| 10 | 13 |
| 12 | 14 |
| 9 | 13 |
| 10 | 14 |
| 8 | 11 |

Then click the Paste Function button (below).



Then you will see (below) the Paste Function box, and you can highlight it as indicated.



Then click OK (above).

Put A3:A8 in the Array1 blank and B3:B8 in the Array2 blank (below).

| | Units of Pear Height | Units of Pear Diameter |
|---|----------------------|------------------------|
| 3 | 8 | 10 |
| 4 | 10 | 13 |
| 5 | 12 | 14 |
| 6 | 9 | 13 |
| 7 | 10 | 14 |
| 8 | 8 | 11 |

CORREL

Array1: A3:A8 = {8;10;12;9;10;8}

Array2: B3:B8 = {10;13;14;13;14;11}

= 0.842700972

Returns the correlation coefficient between two data sets.

Array2 is a second cell range of values. The values should be numbers, names, arrays, or references that contain numbers.

Formula result = 0.842700972

Cancel OK

You can see the Formula result of 0.842700972 in the lower left of the CORREL box (above). Then click OK (above), and you can see the result below.

| | | | |
|----|----------------------|------------------------|--|
| 1 | Units of Pear Height | Units of Pear Diameter | |
| 2 | | | |
| 3 | 8 | 10 | |
| 4 | 10 | 13 | |
| 5 | 12 | 14 | |
| 6 | 9 | 13 | |
| 7 | 10 | 14 | |
| 8 | 8 | 11 | |
| 9 | 0.84270097 | | |
| 10 | | | |